MONTHLY HIGHLIGHTS

NOAA
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
HABITAT CONSERVATION DIVISION

AUGUST 2003

GLOUCESTER, MA OFFICE, ONE BLACKBURN DRIVE, GLOUCESTER, MA 01930

36 PROJECTS REVIEWED AT MAINE AND MASSACHUSETTS JOINT PROCESSING IN AUGUST

For the month of August, 20 projects for Maine and 16 projects for Massachusetts were reviewed at the regular joint processing sessions through the Army Corps of Engineers (ACOE). These totals do not include inland wetland projects. Of these, 13 projects were for the construction or reconstruction of dock and pier structures with associated floats, four fill projects - including one for a restoration effort, and three dredging projects. Other project types include shellfish aquaculture, boat ramps, bridge work, culverts, shoreline stabilization and stream crossing. Though no single town had the bulk of projects, Harpswell and Bailey Island had four pier projects, two shoreline stabilization projects in South Thomaston, and two shellfish aquaculture projects in Cushing. **(sean.mcdermott@noaa.gov, 978/ 281-9113)**

CULVERT REPLACEMENT ON ISLAND ROAD TO IMPROVE TIDAL EXCHANGE

Island Road in Essex, Massachusetts divides a large portion of salt marsh on the Essex River, inhibiting sheet flow of tidal waters across the upper marsh surface. One of two undersized culverts will be replaced and the associated marsh creeks enlarged by hand to enhance water flow. The area will be monitored to evaluate the need for additional work at the second culvert. This project is funded in part through the NOAA Restoration Center's partnership with Ducks Unlimited. **(sean.mcdermott@noaa.gov, 978/ 281-9113)**

WORLDWIDE DECLINE OF WILD FISH POPULATIONS THE THEME FOR AFS ANNUAL MEETING

The 133rd annual meeting of the American Fisheries Society (AFS) was held in Quebec City from August 10-14, 2003. This year's theme, *Worldwide declines of wild fish population*, was covered by an array of topic sessions, including: the status of Atlantic salmon, recovery of fisheries, bycatch, information management, genetic and ecology, habitat fragmentation, marine and freshwater ecology, globalization, and many more. On each day, up to 20 sessions were offered, each focusing on a specific topic. Approximately 215 posters were presented as well. This was a great opportunity to meet people from different agencies and groups from around the world and

NOAA staff from different regions. **(sean.mcdermott@noaa.gov, 978/ 281-9113)**

STREAM SIMULATION FOR FISH PASSAGE: SESSION TOPIC AT AFS ANNUAL MEETING

Passage of fish and other aquatic life through stream crossings (culverts and bridges) has become a topic of interest in recent years. Suitably, a series of talks at the annual AFS meeting were focused on the effects of inappropriately constructed and placed stream crossing structures on fish populations and habitat. Structures in waterways are too commonly sized and placed in a manner which inhibits water flow and fish passage. Undersized bridges and culverts constrict flow, increasing water velocity, limiting fish passage and may result in flooding upstream during high flow periods. Culverts placed above the natural stream bed elevation (perched culverts) create impoundment situations upstream of the structure and prevent passage of anadromous and resident finfish. The *Stream Simulation* topic session at the annual meeting discussed these issues, presented case studies, and provided recommendations for improving stream crossing design. Topics such as *Ecological Considerations in the Design of River and Stream Crossings* by Scott Jackson concluded with recommendations to improve fish passage, including the use of natural material to line culverts, mimicking a natural system. If the structure is designed properly for water flow in all conditions, the limiting factor for simulating a natural setting is the lack of light. Kozmo Bates, presenting *Stream Simulation - Culvert Design for passage of Aquatic Organisms*, recommended designing stream crossing structures which consider the bank full width of the river. Designing for bank full width places the walls of a given structure out of normal water flow, eliminating concerns for flooding and artificially increased water flow. In summary, the session's general conclusion was for the need to properly size and place structures so as to allow for normal water flows under all conditions and to create environments which mimic natural surroundings. Although the results are not surprising to practitioners, the studies and data are valuable to support recommendations to permitting and regulatory agencies.
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FISH CONSERVATION: SESSION TOPIC AT AFS ANNUAL MEETING

Though not dedicated to fish passage, three out of five talks at the Fish Conservation session of the annual AFS meeting were focused on fish passage, the fragmentation of habitat by dams and culverts, and the resulting effects on fish population dynamics. In general, four major points could be taken from this session. The distance up and downstream of an impoundment affects the observed species; the greater the distance from the impounding structure the more the species resembles a free flowing system. Post dam removal, fresh water fish assemblages were observed to resemble those in free flowing systems. In Japanese freshwater systems dammed for centuries, the species richness was reduced relative to free flowing systems. And small tributaries of salmonid streams in Newfoundland were found to be more productive than the associated main stream. To that end, proper sizing and placement of culvert in small streams may be of greater importance to fisheries interests than previously considered. The focus of most of this session was freshwater specific. However, main points can be carried over to anadromous finfish habitat. In conserving natural populations of wild fish, proper placement of stream crossing structures, availability of passage and/or removal of impoundments are essential.
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JAMES J. HOWARD MARINE SCIENCES LABORATORY, HIGHLANDS, NJ 07732

EXOTIC OYSTERS

The National Academy of Sciences, Ocean Studies Board, formally released its long awaited report on the "Feasibility of Introducing Non-Native Oysters into the Chesapeake Bay" on August 14, 2003, in Annapolis, Md. The purpose of the introduction was to determine if these species could be grown to aid the devastated Chesapeake Bay oyster industry, and to introduce a filter feeder into the Bay to benefit water quality. The report, sponsored partly by funding from NOAA, was initiated after the Virginia Seafood Council chose to introduce one million, hatchery originated, infertile spat of the Suminoe or Asian oyster (Crassostrea ariakensis) into ten different locations in Virginia waters of Chesapeake Bay. Because the Virginia Seafood Council applied for a Department of the Army permit through the Norfolk District, NOAA and other federal agencies were able to comment and offer recommendations on the proposal. Members of the Board summarized the findings first in the morning to the report sponsors, and in the afternoon at a press conference which was also open to the general public.

The report considered and analyzed three possible options: 1) no introduction of non-native oysters, 2) limited introduction of sterile (triploid) non-native oysters, and 3) introduction of fertile (diploid) non-native oysters. Option #2 was recommended.
(Stanley.W.Gorski@noaa.gov , 732/ 872-3037)

HURRICANE AND STORM DAMAGE REDUCTION PROJECT - UNION BEACH

HCD staff reviewed the *draft Feasibility Report* (DFR) and the *draft Environmental Impact Statement* (DEIS) prepared by the New York District, ACOE for the proposed Raritan Bay and Sandy Hook Bay Hurricane and Storm Damage Reduction Project, Union Beach, Monmouth County, New Jersey.

The documents discuss the ACOE's proposal to construct levees, floodwalls, storm gates, pump stations, groins, revetments, and other structures in the town of Union Beach in order to minimize storm damage. The project also includes beach nourishment and the dredging of sand from four potential new borrow areas in the Raritan-Sandy Hook Bay area (Keyport, Union Beach, and Port Comfort) and at the False Hook Shoal just east of Sandy Hook. Our comments focused on the need to complete both the essential fish habitat consultation required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Section 7 Endangered Species Act consultation. Issues of concern include the designation of four new borrow areas in valuable fisheries habitat and the impacts on shellfish beds and wetlands.
[Karen.Greene@noaa.gov, 732/ 872-3203 or Julie.Crocker@noaa.gov, 978/ 281-9328 (for ESA issues)]

NEW JERSEY TRANSIT/NEW YORK WATERWAYS PORT IMPERIAL INTERMODAL FERRY TERMINAL

HCD staff reviewed the ACOE's public notice and the environmental assessment prepared for the Federal Highway Administration for a new ferry terminal proposed by New York Waterways, Inc. (NYWW) and New Jersey Transit (NJT) along the Hudson River in Weehawken, Hudson

County, New Jersey. The proposed project site is located in a cove 1,000 feet north of NYWW's existing ferry terminal in Weehawken, NJ. The applicants are requesting authorization to dredge 150,000 cubic yards of sediment from 9.2 acres of shallow water habitat using both a clamshell bucket dredge and a hydraulic dredge. In addition to the dredging, the proposed project includes the installation of 110 concrete and steel piles to construct a 54,560 sf ferry terminal over intertidal and subtidal shallows as well as the construction of more than 2,100 square feet (sf) of ramps and pile supported access walkways. Two barges totaling 7,000 sf of surface area will be permanently moored at the site. In addition, 500 feet of bulkhead will be replaced, and 200 feet of new bulkhead will be installed along the shoreline. The 720 cubic yards of riprap will be placed waterward of the bulkhead as toe armor. Compensatory mitigation for the loss of shallow water habitat and the shading of mudflats and subtidal shallows has not been proposed.

Interagency coordination on this project was initiated in 1999 when a National Environmental Policy Act (NEPA) scoping meeting was held. HCD has expressed interest in this application since it could result in a loss of 9.2 acres of intertidal and subtidal shallows and potential degradation of more than 10 acres of essential fish habitat. Discussions with the applicant and the ACOE centered around use of an existing site instead of a new site, seasonal restrictions of in water work, and compensatory mitigation for loss of fishery habitat.
(Karen.Greene@noaa.gov, 732/ 872-3203)

BARNEGAT BAY ESTUARY PROGRAM (BBEP)
The management committee met at the BBEP's new location at Ocean County College. Ocean County, the BBEP's non-federal partner, had originally placed the program in the planning department. The BBEP and the County Freeholder's decided that the county college would be a more appropriate host for the project and that a stronger association with the college would benefit the program and the college students. The members of the management committee had no objections to the change and look forward to working with the college on various endeavors. The group was brought up to date on several of the county's contributions to the non-federal match including the purchase of a pontoon boat for use by the BBEP, the Ocean County Parks Department, and the Ocean County Vocational & Technical School. Also discussed was the long awaited signing ceremony for the Comprehensive Conservation and Management Plan which was approved last year. The ACOE representative reported that they are ready to move ahead with one of their fast-track restoration projects in the bay. They plan to begin partially filling dredge hole #36 off Harvey Cedars in November. The project is out to bid now.
(Karen.Greene@noaa.gov, 732/ 872-3203)

PHILADELPHIA AIRPORT (PHL) RUNWAY 17-35 AND CAPACITY ENHANCEMENT PROJECT (CEP)
On August 19, 2003, HCD staff attended a scoping meeting and a tour of the airport's areas of possible impacts (wetlands and the Delaware River). The Philadelphia Airport expansion is one of the projects listed for permit process streamlining by the White House to avoid air traffic delays. Representatives from state and federal agencies reviewed the project work plan, "Analysis of Natural and Cultural Resources, Philadelphia Runway 17-35 and Capacity Enhancement Program Environmental Impact Statements."

HCD staff provided comments on the work plan and included the recommendations to expand the EIS discussion on the effects on fisheries and benthos to include availability of food sources; refuge and spawning for fishes for all life stages due to loss of habitats such as wetlands, shallow water, deep water habitats; and conversion of habitats. Also, HCD recommended that discussion and analysis should include direct and indirect impacts and include present and future cumulative impacts.

Species of particular concern to NMFS are the endangered shortnose sturgeon, striped bass, blueback herring, alewife, and American shad and other organisms, as well as habitats that provide food and refuge for them, such as the clam, *Corbicula*, on which shortnose sturgeon feed and wild celery, which provides excellent fisheries habitat. In addition, HCD recommended that all alternatives should be presented for review (from the Airport Master Plan), along with a discussion of what should be included to show why an alternative was rejected. **(anita.riportella@noaa.gov ,732/ 872-3116)**

MILFORD, CT OFFICE, 212 ROGERS AVENUE, MILFORD, CT 06460

IN MEMORIUM

It is with great sadness that the Milford Field Office marks the passing of John Hartmann, Jr., a colleague from the New York District, ACOE. John was Chief of Operations at the District. One of his many tasks that brought us to the same negotiating table was managing federal dredging projects. In our years of association, John was willing to listen to fishery biologists and accept the need for environmental restraints on many of his projects. While the road was not always a simple one for everyone, controversial projects such as the consolidated maintenance dredging of Mamaroneck Harbor and coordination of dredging at Manhattan's Combined Passenger Terminal were successfully implemented with John's active participation. The successes and cooperative environment achieved with those projects continue to facilitate interagency coordination and resolution of mission conflicts. HCD staff that worked with John over the years will miss his counsel. **(Michael.Ludwig@noaa.gov or Diane.Rusanowsky@noaa.gov , 203/ 882-6504)**

SUMMER MENTORING OPPORTUNITY DRAWS TO A CLOSE

The Milford Field Office bids a fond farewell to Christopher Parkins and Alex Weill, two student recipients of the American Fisheries Society's Hutton Junior Fisheries Biology scholarships. The Hutton program matches high school students with a professional mentor for a summer of hands-on experience in fisheries science and is designed to stimulate interest in pursuing a career in fisheries science, particularly among groups under-represented in fisheries professions. Chris spent the summer investigating the food habits of juvenile tautog and cunner, and Alex evaluated the efficacy of using skeletal anomalies in *Fundulus* spp. as a habitat quality indicator for salt marshes. Chris, Alex, and I thank the staff of the NOAA/Fisheries Milford laboratory for providing a variety of support for these projects. In particular, their experiences would not have been possible without significant contributions by Jose Pereira, John Ziskowski, and Paul Clark. This fall, Chris is entering the Fisheries program at the University of Rhode Island. Alex will

continue her studies at The Hopkins School in greater New Haven, where she will refine her field techniques in an environmental studies class. The American Fisheries Society's Hutton program is an outstanding opportunity for students and mentors alike. Through this program, Chris and Alex were able to explore fisheries as a potential career interest firsthand and our field office had a chance to get some interesting habitat research done in collaboration with our students and Science Center counterparts. **(Diane.Rusanowsky@noaa.gov , 203/ 882-6504)**

INTEREST IN AQUACULTURE ON THE RISE IN SOUTHERN NEW ENGLAND

Aquaculture is shifting from traditional to agribusiness practices in our region, with the waters and embayments of Narragansett Bay, Long Island and Rhode Island Sounds being contemplated for aquaculture projects. Since the New England ACOE District authorized the Mohegan tribe's application, more large scale proposals are being considered. Generally, these proposals would cover large tracts (tens of hectares) and employ floating, mid-water, and bottom culture components. Pre-application meetings among the project proponents and involved resource managers and regulators have clarified the application criteria and objectives of involved agencies or commissions at the local, state, and federal levels. The resulting dialogue has proven successful; application processing time has been reduced and standards developed to address user conflicts and boating safety. Connecticut Sea Grant has been most helpful in these matters. While it is clear that not all projects can be authorized and more work needs to be done to fully address potential conflicts with submerged aquatic vegetation, we are encouraged that multi-use of most aquaculture sites has been maximized and peaceful co-existence among site users appears to be evolving. Certain design criteria that facilitate mixed uses and improve project safety merit note: 1) mooring systems must be designed to withstand hurricane or persistent Nor'easter storm events, 2) surface facilities must be minimized and wherever possible, 3) all structures must be installed and maintained at least 2.4 meters below the lower low tide elevation, and 4) boater safety buoys marking the farm site must be coordinated with the state and federal agencies responsible for such navigational warnings. Finally, when user conflicts are not fully defined, the issuance of trial authorizations are justified to ensure that user conflicts can be identified and addressed. **(Michael.Ludwig@noaa.gov , 203/ 882-6504)**

OYSTER AQUACULTURE PROJECT PROPOSED ON LONG ISLAND

Milford Field Office staff have been coordinating with a permit applicant interested in establishing an oyster aquaculture operation in Greenport, New York. Greenport, which lies on the north fork of Long Island, was once the home of an extensive and vibrant maritime economy. Increasing interest in producing shellfish in local waters is expected to diversify water dependent uses and return part of the local economy to its traditional maritime roots.
(Diane.Rusanowsky@noaa.gov , 203/ 882-6504)

AMERICAN LOBSTER HABITAT EXPLORED AS ADVANCE MITIGATION

The New York State Department of Environmental Conservation, ACOE New York District, NOAA/Fisheries Northeast Regional Office, and Northeast Fisheries Science Center are exploring the concept of performing mitigation in advance of certain in-water construction activities. For the present effort, these agencies are using American lobster habitat as a trial effort. Known lobster congregation areas have been identified and characterized, and suitable habitat enhancement materials located and evaluated. In this situation, beneficial use of rock is being considered to create cryptic habitat for lobsters. Using data obtained from Rhode Island's

North Cape oil spill, guidance has been developed for determining the suitable habitat criteria for habitat enhancement near Staten Island. As with the North Cape effort, the proposed mitigation concept is focusing on creating cryptic habitat for recently settled juvenile American lobsters. The size of the spaces and its stability are especially important design features to meet the stated objective of improving juvenile lobster survival rates. There also is some expectation that the created habitat will prove to be beneficial to some species managed under the Magnuson-Stevens Fishery Conservation and Management Act. **(Michael.Ludwig@noaa.gov , 203/ 882-6504)**

NEPTUNE TRANSMISSION PROJECT PROPOSED FOR NEW YORK METRO

Neptune Regional Transmission System, LLC has applied to the New York District, ACOE for a Section 10 and 404 permit to install a submarine electric transmission cable between Sayreville, New Jersey and the Town of Hempstead, Nassau County, New York. In sum, the proposal entails construction of a 600 MW (500kV) high voltage direct current cable that would connect load centers in Long Island with transmission generation resources in New Jersey. The entire cable alignment extends from Sayreville, New Jersey through the Raritan River, Raritan Bay and the Atlantic Ocean to Jones Inlet and Hempstead Bay. From there, it would pass through the Town of Hempstead before terminating at New Cassel, New York. Subaqueous cable installation would primarily be conducted using water-jetting technology, and the cable embedded generally 4 feet below the seabed and 17 feet below the authorized depths of the federal navigation channels. The in-water work is proposed in designated Essential Fish Habitat for a variety of species and life stages. Project review is being coordinated between the Milford and Sandy Hook field offices. At this time, we are requesting a 30-day extension to the comment period pursuant to our local operating procedures with the New York District, ACOE. **(Diane.Rusanowsky@noaa.gov , 203/ 882-6504; Karen.Greene@noaa.gov , 732/ 872-3023)**

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WINERGY IN VIRGINIA

Winergy, a wind power developer, is proposing a windmill farm in VA. Several potential sites were nixed by the Navy, but sites remain in the Smith Island area. A public meeting was held in Eastville, VA, 19 August; considerable local support was expressed at the meeting. Local governments perceive the windmill farm as a potential source of revenue in an area that is economically depressed. **(Tim.Goodger@noaa.gov, 410/ 226-5723)**

"THE PENINSULA"

The Peninsula is a planned residential development (1400 units) adjacent to Indian River Bay, DE. Despite the fact that site is approximately 800 acres, development plans include conversion of 6 acres of shallow water habitat to recreational beach, much of which will be nontidal. **(Tim.Goodger@noaa.gov, 410/ 226-5723)**